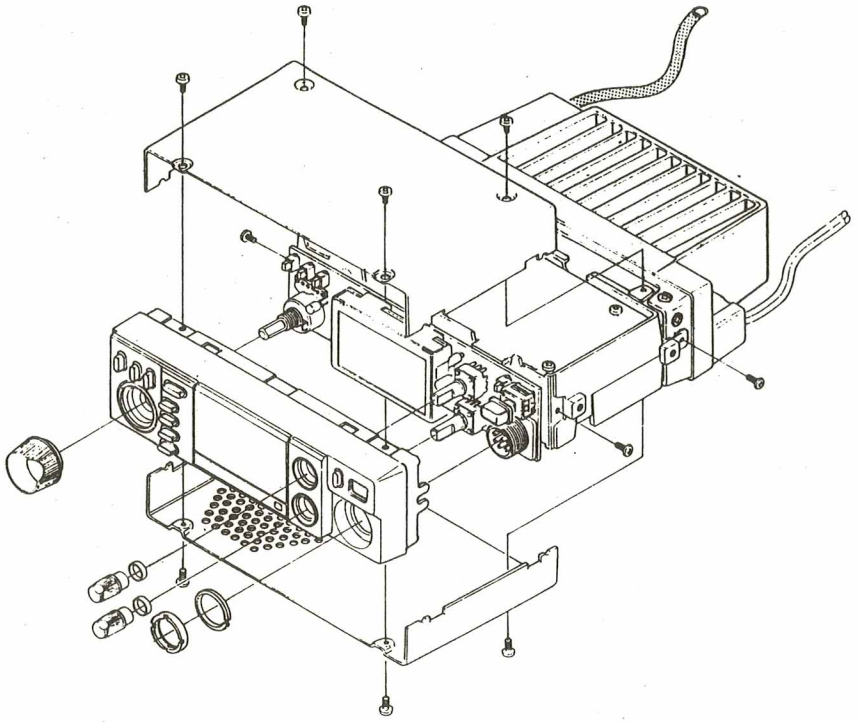
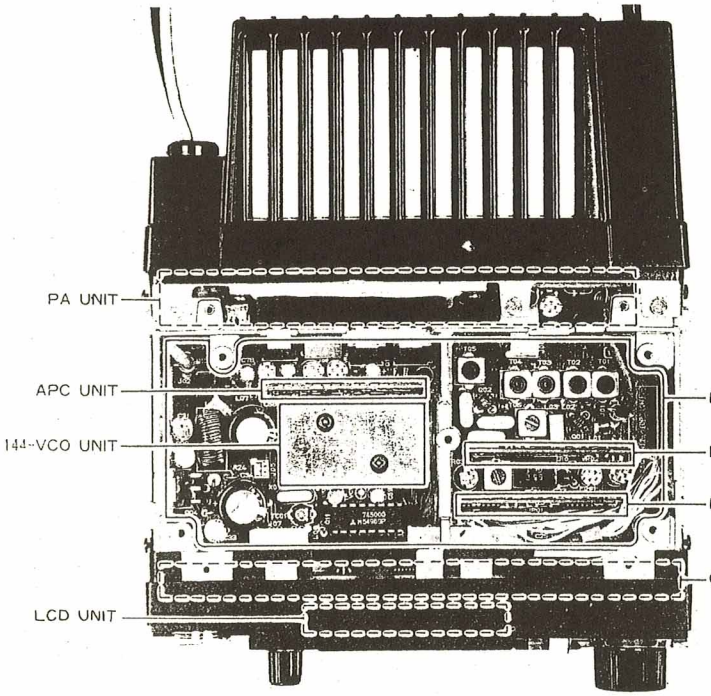
YAESU FT 212RH





BOARD LAYOUT

MAIN UNIT VOLTAGE CHART

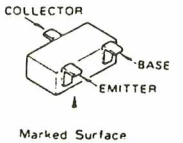
(DC VOLTS)

Symbol No.	E(S)	C(D)	B(G1)	G2	REMARKS
Q1001	0.2	9.0	0	5.2	
Q1002	0.18	8.60	0	0.15	
Q1003	0.2	8.8	0.8		
Q1005	12.8	13.6	13.6		
Q1006	0.6	8.5	1.0		
Q1007	0	11.80/3.50	0.55/0.55		RF POWER HIGH/LOW
Q1008	13.8	9.0	13.8		
Q1009	0	6.5	0.7		
Q1010	0	5.4	0.7		
Q1013	13.8	8.0	13.8		
Q1014	0	13.8	0.6		
Q1017	12.4/13.6	12.4/0	11.2/13.2		RX/TX

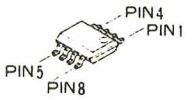
MAIN UNIT IC VOLTAGE CHART

(DC VOLTS)

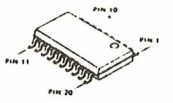
Symbol No. \ PIN No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	REMARKS
Q1004	0.7	0.7	0	6.4	13.6												
Q1011	2.3	2.6	4.4	0	0	0/3.6	0	0	1.5	0	4.6	0	0	2.0	2.0	4.6	RX/TX
Q1015	13.6	0	9.0														
Q1016	9.0	0	5.0														



2SC1623(L6) (Q402)



M5223FP (Q403)

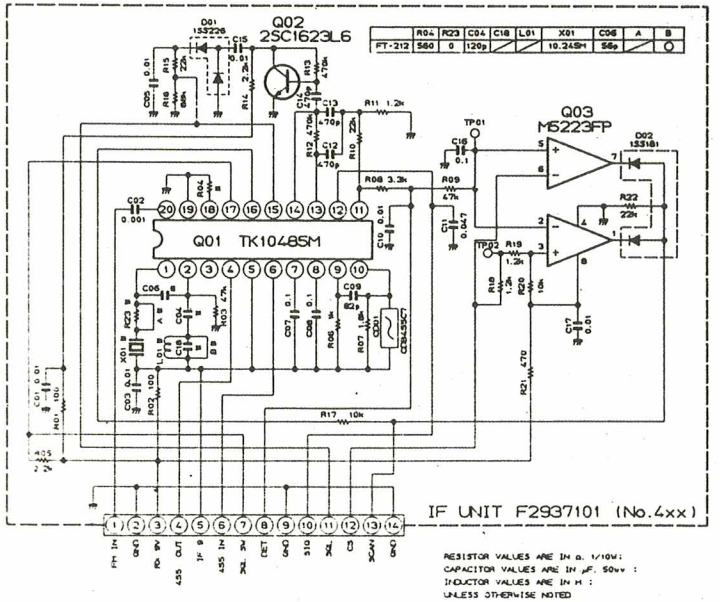


TK10487M (Q401)

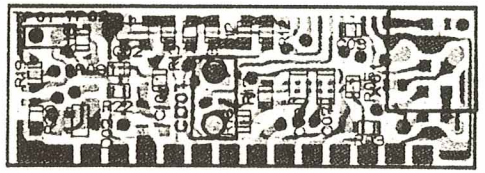
IF UNIT VOLTAGE CHART

(DC VOLTS)

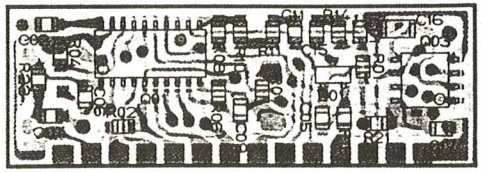
1 FM IN	2 GND	3 RX 9V	4 455 OUT	5 IF 9	6 455 IN	7 SQL SW	8 DET	9 GND	10 SIG	11 SQL	12 CS	13 SCAN	14 GND	REMARKS
8.7/0	0	9.0/0	8.0/0	8.4/0	6.6/0	SQ OFF 0/0 SQ ON 7.4/0	3.2/0	0		0.2~1.5/1.0	2.7/0	SQ OFF 10/0.1 SQ ON 0/0.1	0	RX/TX



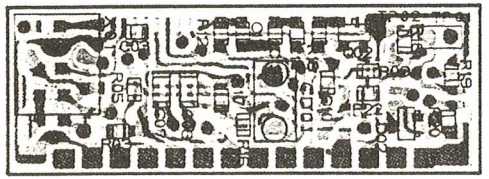
IF UNIT (No. 4 ××)



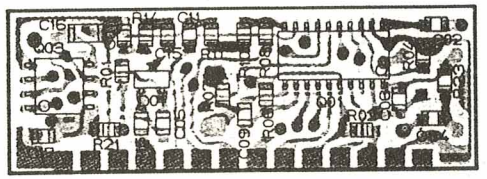
obverse view of "mixed-component" side



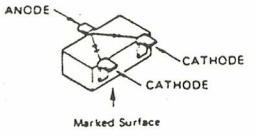
obverse view of "chip-only" side



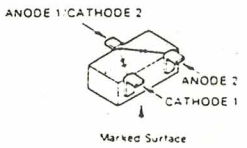
reverse view of "mixed-component" side



reverse view of "chip-only" side



1SS181 A3 (D402)

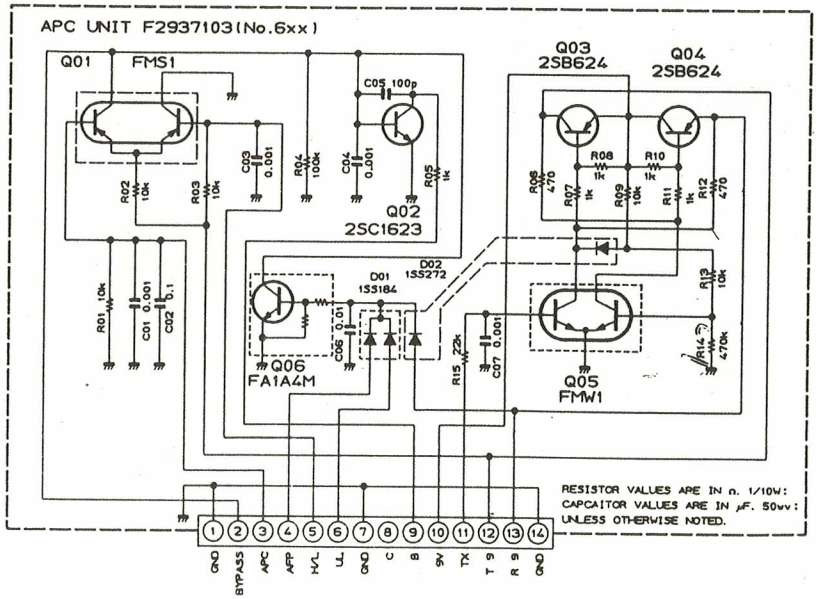


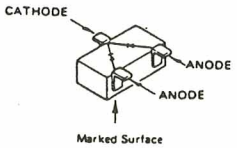
1SS226 C3 (D401)

APC UNIT VOLTAGE CHART

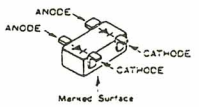
(DC VOLTS)

1 GND	2 BYPASS	3 APC	4 AFP	5 H/L	6 UL	7 GND	8 C	9 B	10 9V	11 TX	12 T9	13 R9	14 GND	REMARKS
0	0/0.6	0/5.7	0	RF HIGH 0/3.1 RF LOW 0/1.2	0.1/0.1	0	0/3.7	13.6/13.2	9.0/9.0	0/3.6	0/9.0	9.0/0	0	RX/TX



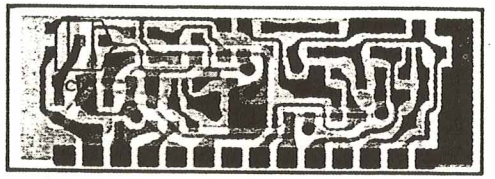


1SS184(B3) (D601)

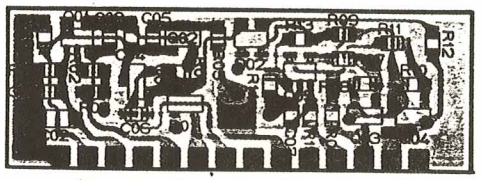


1SS272(A1) (D602)

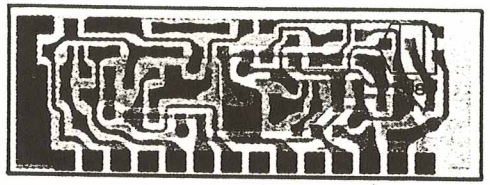
APC UNIT (No. 6 ××)



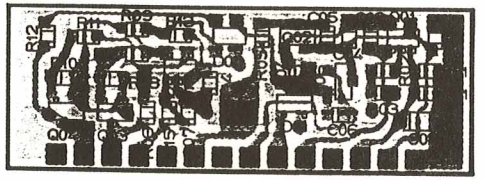
obverse view of "Tantalum CAP" side



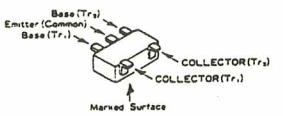
obverse view of "chip-only" side



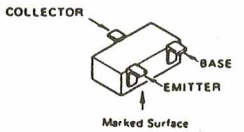
reverse view of "Tantalum CAP" side



reverse view of "chip-only" side

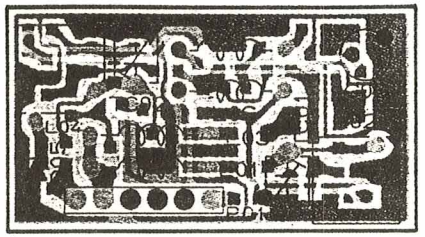


FMS1(S1) (Q601)
FMW1(W1) (Q605)

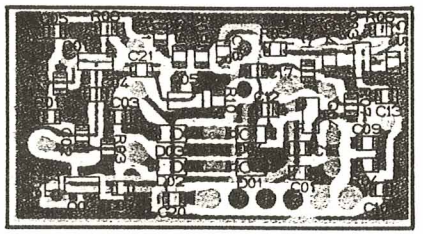


2SB624(BV4) (Q603,604)
2SC1623(L6) (Q602)
FA1A4M-T2B(L33) (Q606)

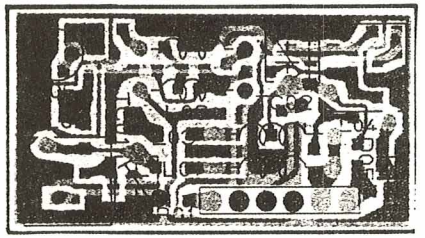
144-VCO UNIT (No. 3 ××)



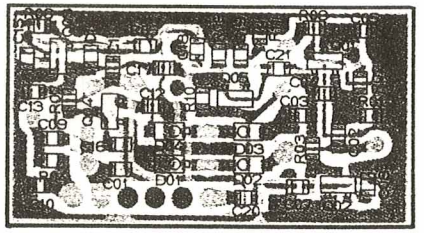
obverse view of "component" side



obverse view of "chip-only" side



reverse view of "component" side

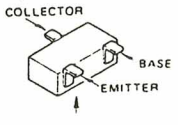


reverse view of "chip-only" side

VCO UNIT VOLTAGE CHART.

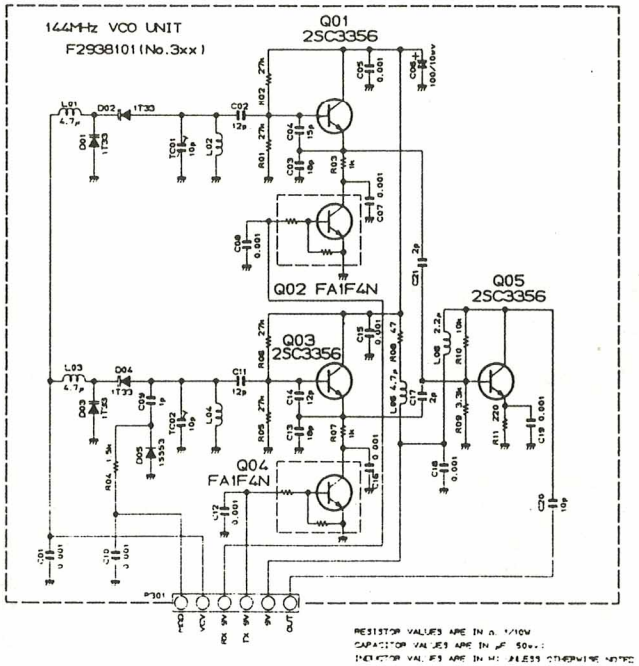
(DC VOLTS)

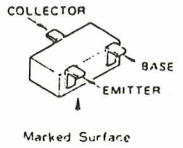
MOD	VCV	R9	T9	9	OUT	REMARKS
3.6		9.0/0	0/9.0	9.0	0	RX/TX



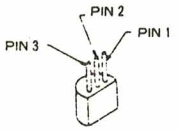
Marked Surface

2SC3356(R24)
(Q301,303,305)
FA1F4N-T2B(R24)
(Q302,304)

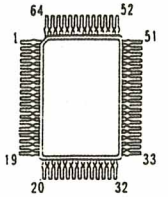




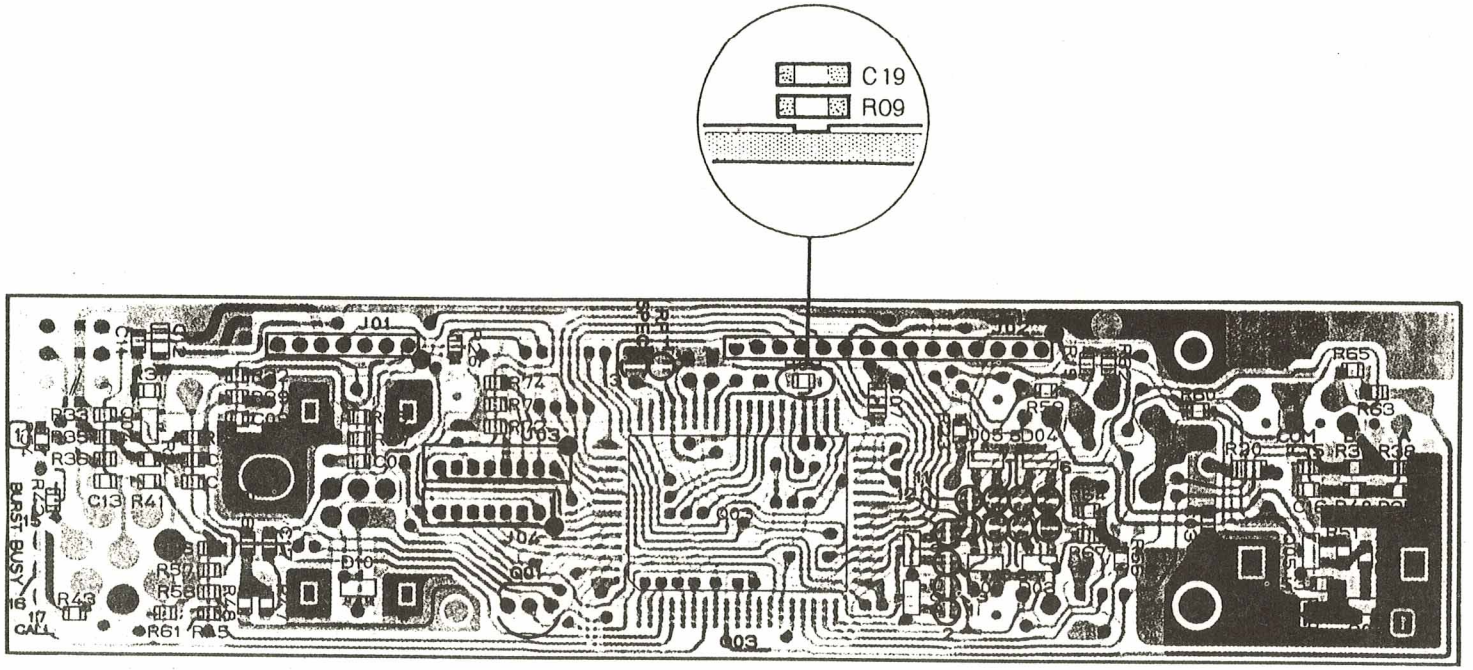
2SA812(M6) (Q2002)
2SB624(BV4) (Q2005)
2SC1623(L6) (Q2004,2006)



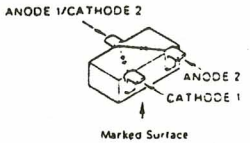
PST5230-2 (Q2001)



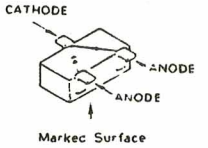
HD404418A01F (Q2003)



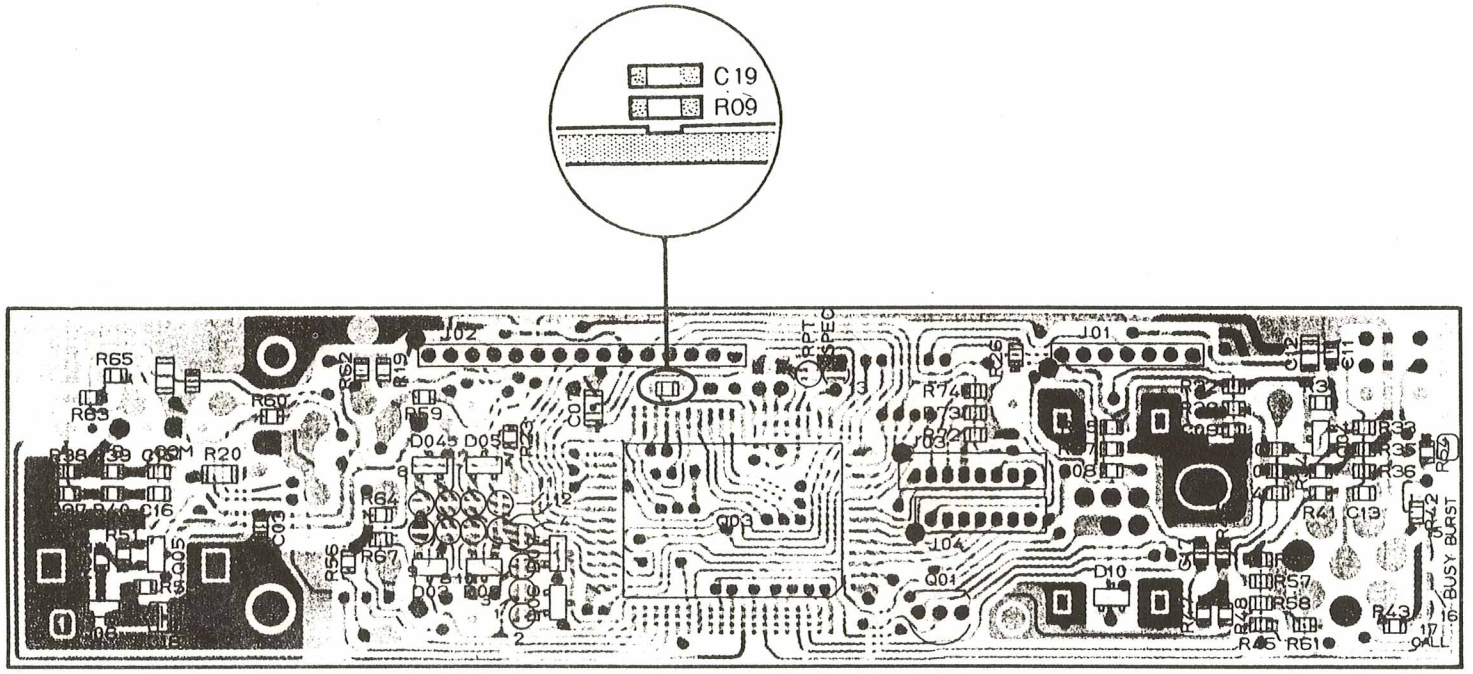
obverse view of "IC" side



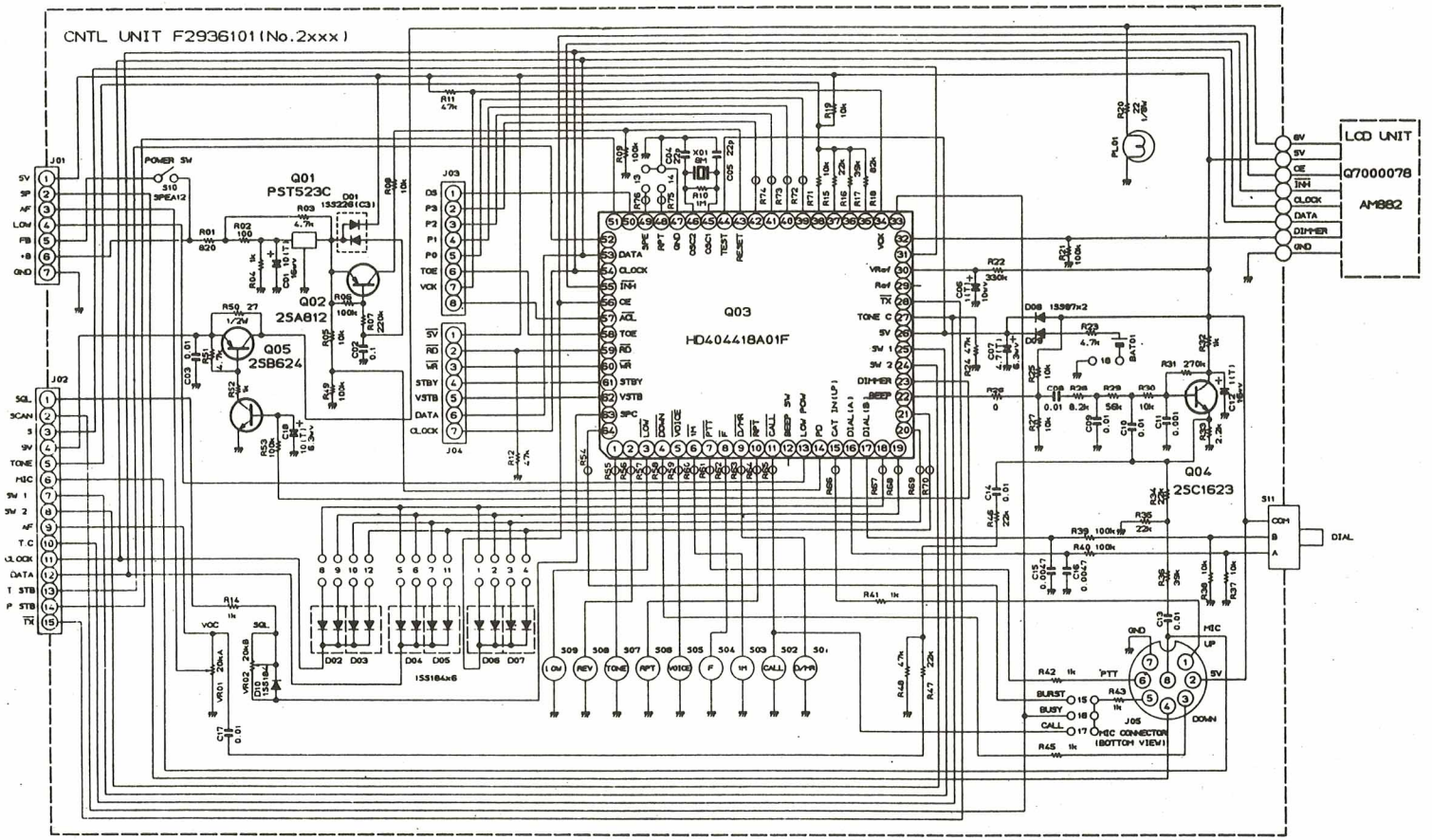
1SS226(03) (D2001)



1SS184(B3)
(D2002,2003,2004
2005,2006,2007
2010



obverse view of "IC" side



RESISTOR VALUES ARE IN Ω, 1/10W;
CAPAVITOR VALUES ARE IN μF, 50WV;
UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.

1	BS0	9	SSS1
2	BS1	10	PRS
3	BS2	11	STE
4	BS3	12	P3
5	IF0	13	SPECIAL
6	IF1	14	APT
7	IF2	15	BURST
8	SSS0	16	BUSY
		17	CALL
		18	BACK UP

R54, R58, R61, R65, R68: 22kΩ

R56-R57, R59, R60, R62-R64, R67-R70: 150kΩ

R44: OUT OF USE

MAIN UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q1004	TDA2003	μPC2002V		
	G1090769	G1090284		
Q1014	2SC1623-T2BL7	2SC2712BL TE85R	2SC2462 LDTR	2SC2812 L7TR
	G3316237G	G3327127B	G3324627D	G3328127G
Q1015	μPC7805H	L7805		
	G1090299	G1090776		
D1009	1SS226 TE85R	1SS123-T2B		
	G2070003	G2070020		
D1014	1SS184 TE85R	MC2838-T14-2	DCB015-TA	
	G2070009	G2070018	G2070012	

IF UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q402	2SC1623-T2BL6	2SC2712GR TE85R	2SC2462 LCTR	2SC2812 L6TR
	G3316237F	G3327127G	G334627C	G3328127F
Q401	1SS226 TE85R	1SS123-T2B		
	G2070003	G2070020		
D402	1SS181 TE85R	MC2836-T14-2	DCA015-TA	
	G2070001	G2070024	G2070014	

MIC UNIT

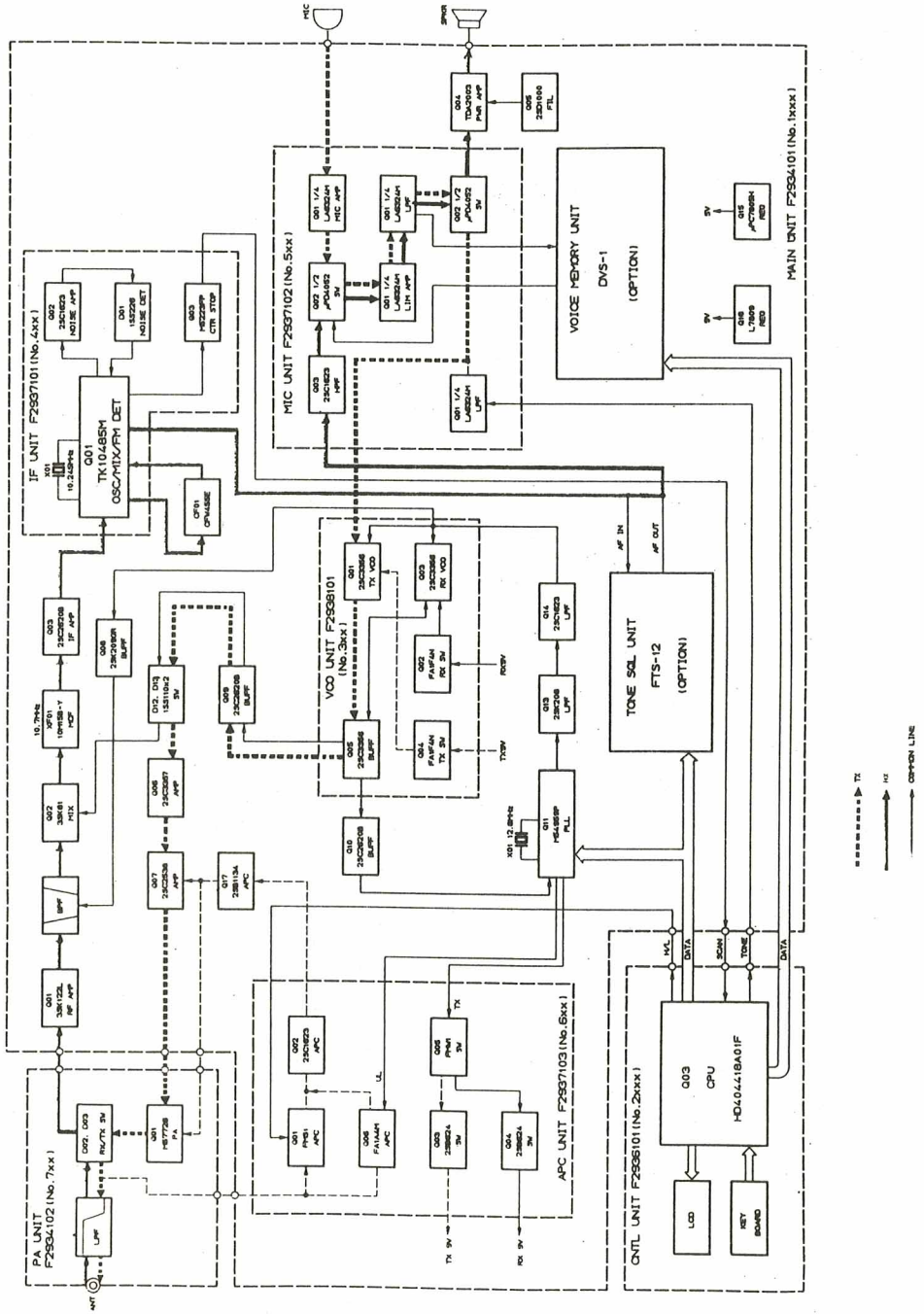
Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q501	LA6324M	μPC324G		
	G1090559	G1090603		
Q503	2SC1623-T2BL6	2SC2712GR TE85R	2SC2462 LCTR	2SC2812 L6TR
	G3316237F	G3327127G	G3324627C	G3328127F

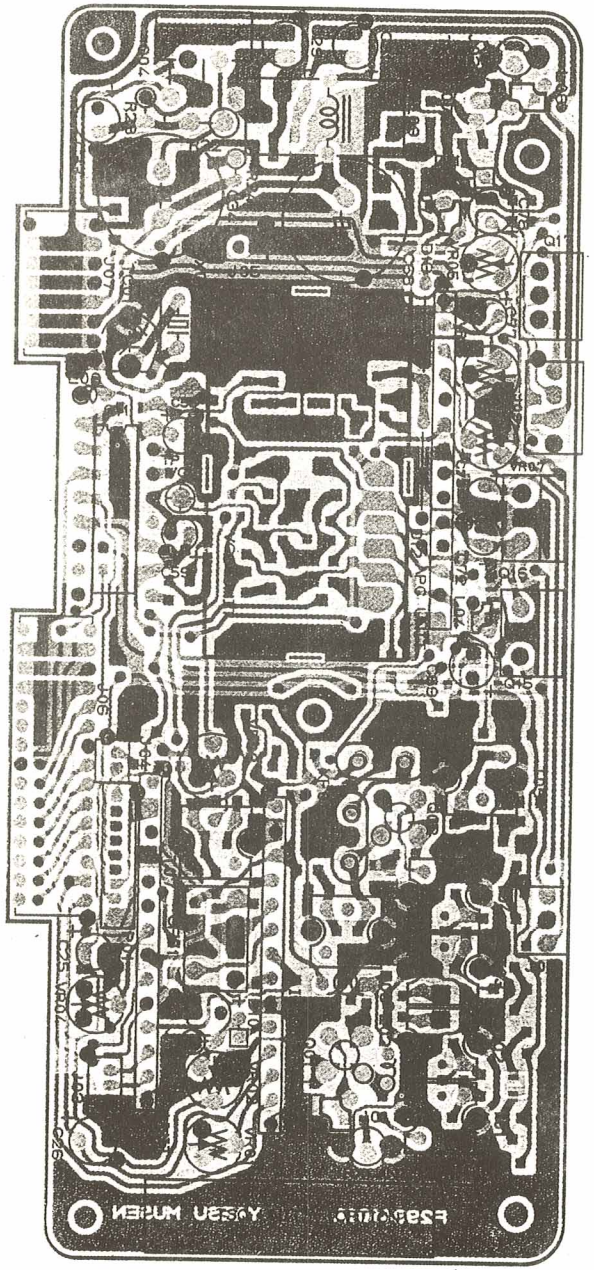
APC UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q602	2SC1623-T2BL6	2SC2712GR TE85R	2SC2462 LCTR	2SC2812 L6TR
	G3316237F	G332712G	G3324627C	G3328127F
D601	1SS184 TE85R	MC2838-T14-2	DCB015-TA	
	G2070009	G2070018	G2070012	

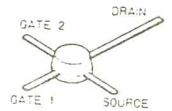
CONTROL UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q2002	2SA812-T2BM6B	2SA1162GR TE85R	2SA1052 MCTR	2SA1179 M6TR
	G3108127F	G3111627G	G3110527C	G3111797E
Q2004,2006	2SC1623-T2BL6	2SC2712GR TE85R	2SC2462 LCTR	2SC2812 L6TR
	G3316237F	G3327127G	G3324627C	G3328127F
D2001	1SS226 TE85R	1SS123-T2B		
	G2070003	G2070020		
D2002,2003,2004 2005,2006,2007 2010	1SS184 TE85R	MC2838-T14-2	DCB015-TA	
	G2070009	G2070018	G2070012	

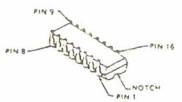




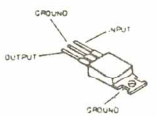
obverse view of "component" side



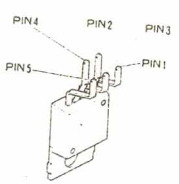
3SK81 (Q1002)
3SK122L (Q1001)



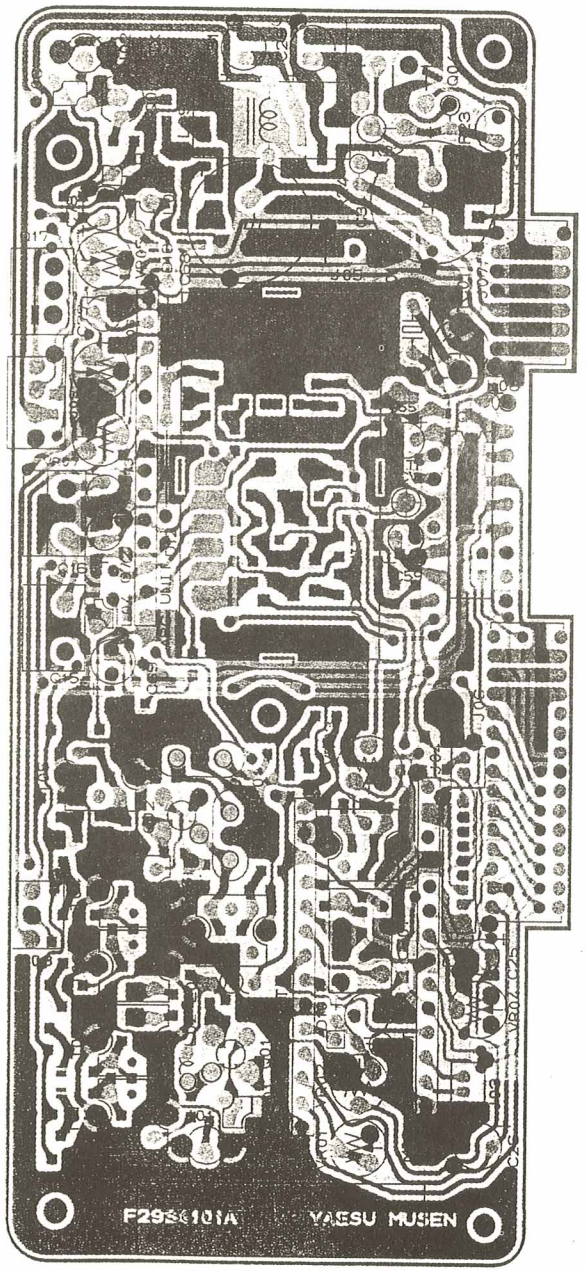
M54959P(Q1011)



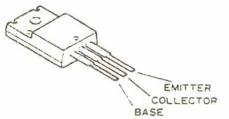
μPC7805H (Q1015)
L7809 (Q1016)



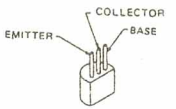
TDA2003 (Q1004)



reverse view of "component" side

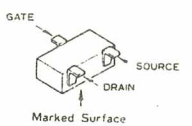


2SB1134R (Q1017)

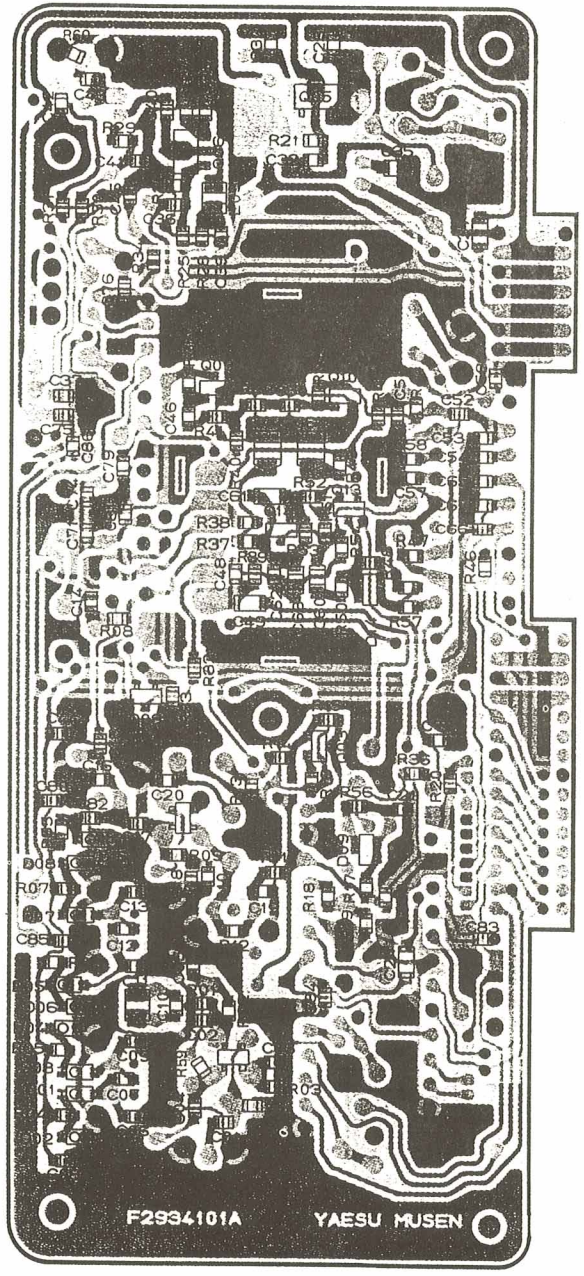


2SC2538 (Q1007)

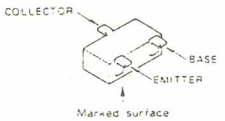
2SD1000(LL) (Q1005)
2SC3357(RK) (Q1006)



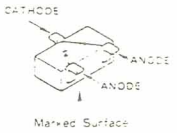
2SK209GR(XG) (Q1008)
2SK208Y (JY) (Q1013)



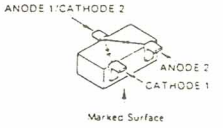
obverse view of "chip-only" side



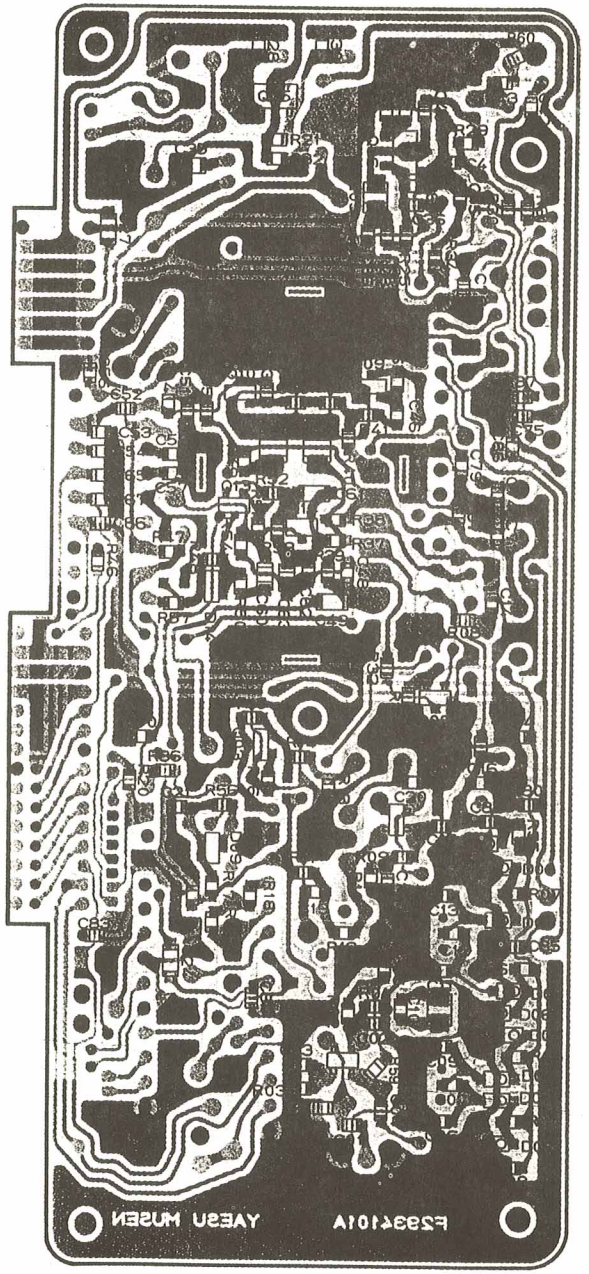
2SC2620(0B)
(Q1003,1009,1010)
2SC1623(L7) (Q1014)



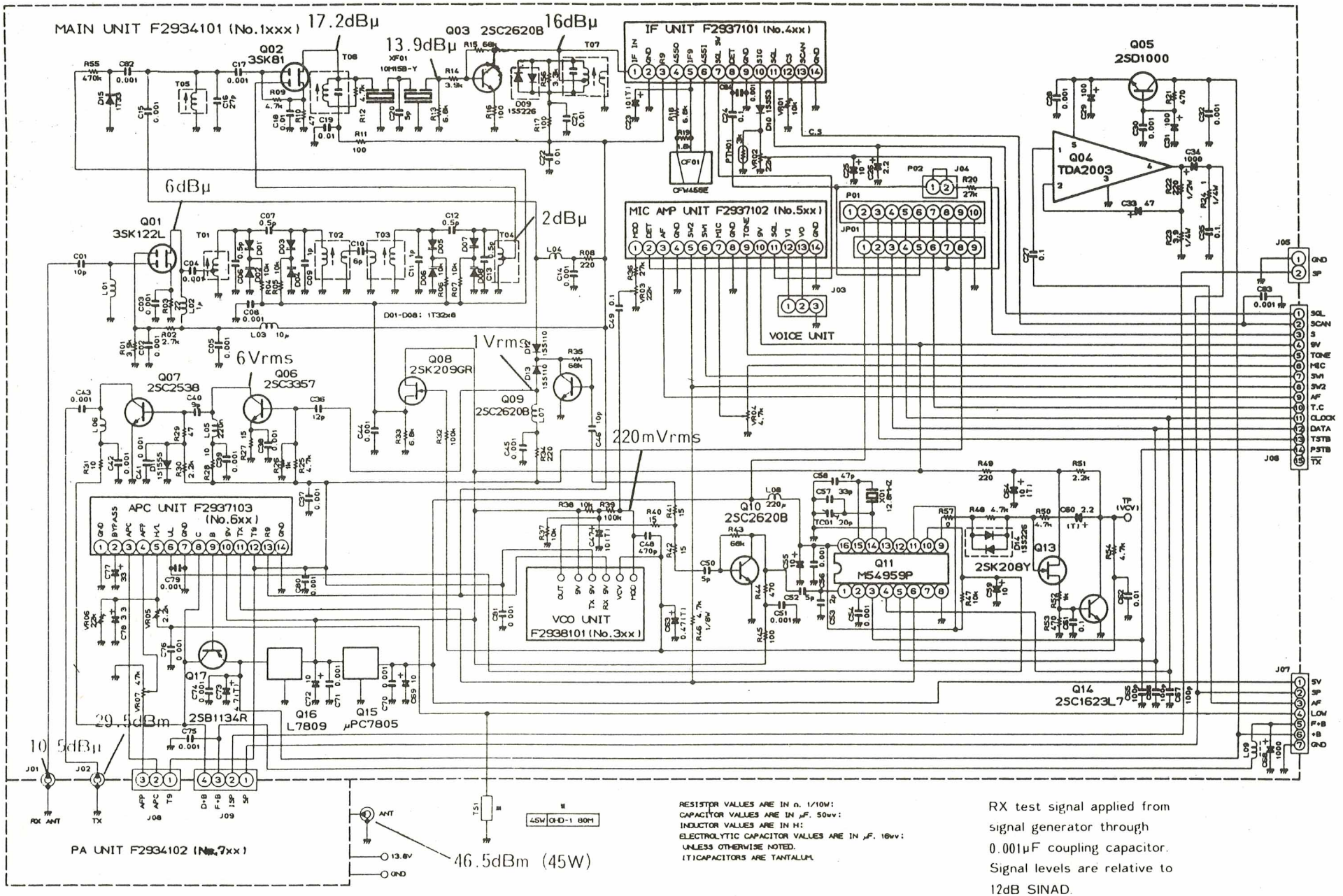
1SS184(B3) (D1014)



1SS226(C3) (D1009)



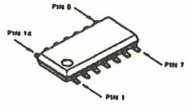
reverse view of "chip-only" side


MAIN UNIT F2934101 (No.1xxx)
17.2dBμ
13.9dBμ
16dBμ
Q03 2SC2620B
Q02 3SK81
IF UNIT F2937101 (No.4xx)
Q05 2SD1000
Q04 TDA2003
6dBμ
Q01 3SK122L
2dBμ
MIC AMP UNIT F2937102 (No.5xx)
VOICE UNIT
1Vrms
6Vrms
Q08 2SK209GR
Q07 2SC2538
Q06 2SC3357
Q09 2SC2620B
220mVrms
APC UNIT F2937103 (No.6xx)
VCO UNIT F2938101 (No.3xx)
Q10 2SC2620B
Q11 M54959P
Q13 2SK208Y
Q14 2SC1623L7
Q17 2SB1134R
Q16 L7809
Q15 μPC7805
29.5dBm
10.5dBμ
PA UNIT F2934102 (No.7xx)
46.5dBm (45W)
RESISTOR VALUES ARE IN Ω, 1/10W;
CAPACITOR VALUES ARE IN μF, 50wv;
INDUCTOR VALUES ARE IN H;
ELECTROLYTIC CAPACITOR VALUES ARE IN μF, 16wv;
UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
RX test signal applied from signal generator through 0.001μF coupling capacitor.
Signal levels are relative to 12dB SINAD.

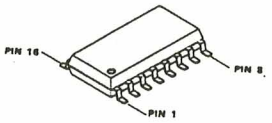
MIC UNIT VOLTAGE CHART

(DC VOLTS)

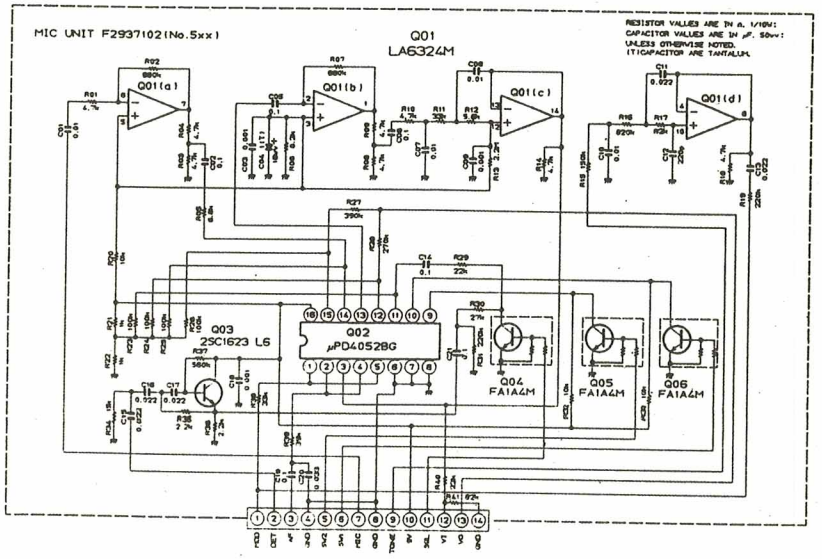
1 MOD	2 DET	3 AF	4 GND	5 SW2	6 SW1	7 MIC	8 GND	9 TONE	10 9V	11 SQL	12 VI	13 VO	14 GND	REMARKS
0/2.1			0	0/4.3	0	0	0	1.6/1.6	9.0/9.0	0	3.0/3.0	3.0/9.0	0	RX/TX



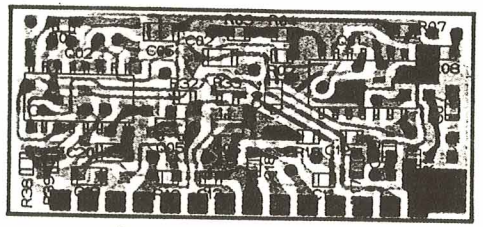
LA6324M (Q501)



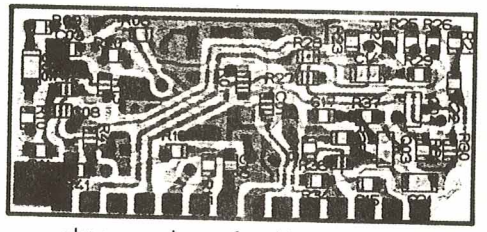
µPD4052BG (Q502)



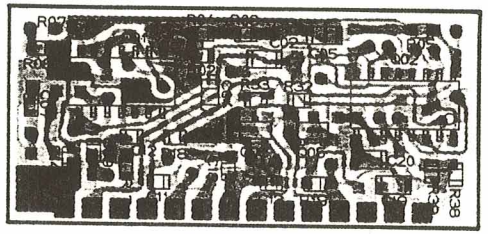
MIC UNIT (No. 5 ××)



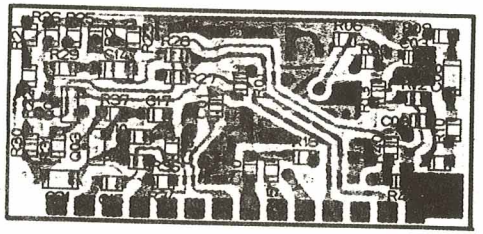
obverse view of "IC" side



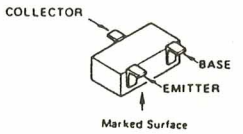
obverse view of "chip-only" side.



reverse view of "IC" side



reverse view of "chip-only" side



2SC1623(L6) (Q503)
FA1A4M-T2B (L33)
(Q504-506)